

Detect–Treat–Prevent–Build: Strategy for TB Elimination in India by 2025

INTRODUCTION

Tuberculosis (TB) is one of the world's most deadly diseases, killing three people every minute. Each year 9 million people develop TB and 1.5 million dies from the disease. In 2014, the World Health Assembly unanimously approved a new End TB Strategy to end the global TB epidemic by 2035 – the first time governments have set a goal to end TB. A main component of the End TB Strategy is “Integrated, Patient-Centered Care, and Prevention,” and a key paradigm shift in the Global Plan to End TB 2016–2020.^[1] Ending TB and achieving the SDGs requires intensified action across government ministries, communities, the private sector, and civil society. It will take health and socioeconomic interventions, along with research and innovation.^[2]

India has been engaged in TB control activities for over 50 years and yet TB continues to be India's important public health problem. TB kills an estimated 480,000 Indians every year and more than 1400 every day. India also has more than a million “missing” cases every year that are not notified and most remain either undiagnosed or unaccountably and inadequately diagnosed and treated in the private sector. This tragic loss of life, continued suffering, and poverty needs to be ended with the concerted of all stakeholders for which, we are now better prepared with the effective interventions and technologies for diagnosis, treatment and care of TB.

Over the last National Strategic Plan (NSP 2012–2017) period, we did make significant gains in strengthening the support structures, program architecture, and implementation environment for TB control. This included mandatory notification of all TB cases, integration of the program with the general health services, expansion of diagnostics services, programmatic management of drug-resistant TB (PMDT) service expansion, and single-window service for TB-HIV cases, national drug resistance surveillance and revision of partnership guidelines. However, we have to recognize that more needs to be done to drastically reduce the TB incidence in India. The NSP 2017–2025 builds on the success and learning's of the last NSP and encapsulates the bold and innovative steps required to eliminate TB in India.^[3]

THE JOURNEY SO FAR

The National TB Programme of India (NTP) was initiated in 1962 and was originally designed for domiciliary treatment, using self-administered standard drug regimens. A combined review of the program in 1992 concluded that the NTP could not achieve its objectives of TB control, and hence, on the recommendations of an expert committee, a revised strategy to control TB was pilot-tested in 1993. A full-fledged program

was started in 1997 and rapidly expanded with excellent results. This Revised National TB Control Programme (RNTCP) that uses the DOTS (Directly Observed Treatment, Short-course chemotherapy) strategy achieved country coverage on World TB Day, March 24th, 2006. The program has achieved several milestones related to diagnosis and treatment services of TB since 2006. Since inception in 1997 and up to December 2015, more than 19 million patients were initiated on treatment and more than 3.5 million additional lives have been saved. The National AIDS Control Programme and RNTCP have developed a “National framework of joint TB/HIV Collaborative activities.” The nationwide coverage of services for PMDT, which began in 2007, has been achieved in March 2013. The government is also proactively engaging with private practitioners, number of private organizations, NGOs, professional bodies such as Indian Medical Association, to enhance notification of TB cases. Central TB Division, in collaboration with National Informatics Centre, has developed a case-based web-based platform-“Nikshay” in 2012, which has now been scaled up nationally. The earlier issues and challenges regarding poor feedback and follow-up of diagnosed patients during treatment and those who had completed treatment for possible recurrence or relapse; these now have been addressed in the recent RNTCP Technical and Operational Guidelines.^[3] The Standards for TB Care in India has been published jointly by the RNTCP and World Health Organization in 2014; this lays down uniform standards for TB care for all stakeholders in the country.^[4,5]

NATIONAL STRATEGIC PLAN 2012–2017 KEY ACHIEVEMENTS

India's achievements in TB control over the past decade are remarkable. More than 90 million people have been tested, more than 19 million TB patients detected and treated, and millions of lives saved by the RNTCP's efforts. India achieved complete geographical coverage for diagnostic and treatment services for multidrug-resistant TB (MDR-TB) in 2013, with a remarkable 93,000 persons with MDR-TB diagnosed and put on treatment till 2015.^[6]

The Government of India (GOI), Ministry of Health and Family Welfare, notified for prohibiting the import of serodiagnostic test kits for TB and also the manufacture, sale, distribution, and use of such kits for TB, on June 7th, 2012. Another government order issued by the GOI in May 2012 mandates all health-care providers to notify every TB case diagnosed and/or treated to local authorities. RNTCP also rolled out an innovative and visionary electronic recording and reporting system (Nikshay) across the country in 2012, with 98% of reporting units

sending in case-based reporting of TB patients, including notifications from private providers. Innovative approaches, including interface agencies and e-voucher systems for free drugs, have been successfully deployed as pilots to engage more private providers and improve quality of care. Modern media are being creatively used for TB control with India's leading actor, Amitabh Bachchan's campaign, "TB Harega, Desh Jeetega," with commendable investments by the Ministry and corporations to broadcast these messages.^[7]

BUT CHALLENGES REMAIN

The GOI's Joint Monitoring Mission^[7] observed that the implementation of the NSP for 2012–2017 did not achieve the projected increase in case detection by the RNTCP. In addition, the ambitious expansion of resources planned under the NSP, 2012–2017, will have tripled the expenditure of the prior plan but has not been matched by allocations. While RNTCP expenditure has increased 27% since 2012, there is a growing gap between the allocation of funds and the minimum investment required to reach the goals of the Plan.

CONTRIBUTION OF MEDICAL COLLEGES IN TUBERCULOSIS CONTROL THROUGH REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Medical college faculty, who are academicians are seldom directly involved in the implementation of the National Public Health Programmes. More than a decade ago, for the first time in the global history of TB control, medical colleges of India were involved in the RNTCP of GOI. A Task Force mechanism at the national, zonal, and state level was established. The NTF

has been the voice of the collective opinion of academicians in medical colleges and has contributed in shaping key policy issues, such as, ensuring that teaching and training regarding RNTCP and provision of infrastructural facilities such as DMC and DOT Centre at medical colleges are made mandatory by Medical Council of India; rational use of fluoroquinolone antibiotics in the treatment of respiratory tract infections; Airborne Infection Control Policy, among other. Steps for the involvement of individual medical colleges includes sensitizing faculty members about RNTCP services, identifying a faculty member as a "Nodal Officer" for coordinating RNTCP activities and training of staff. Other steps include formation of a "Core Committee" consisting of the heads of various departments. Core Committees, at the level of medical colleges, facilitated interdepartmental coordination for the implementation of DOTS strategy. Overall, at a national level, medical colleges have contributed to 25% of TB suspects referred for diagnosis; 23% of "new smear-positives" diagnosed; 7% of DOT provision within medical college and 86% treatment success rate among new smear-positive patients. As the program widens its scope, future challenges include sustenance of this contribution and facilitating universal access to quality TB care; greater involvement in operational research relevant to the program needs and better coordination mechanisms between district, state, zonal, and national level.^[8]

THE NATIONAL STRATEGIC PLAN FOR TUBERCULOSIS ELIMINATION 2017–2025

The NSP for TB elimination 2017–2025 is a framework to guide the activities of all stakeholders including the national and state governments, development partners, civil society organizations,

Table 1: National Strategic Plan 2017-2025 results framework (impact and outcome indicators and targets)^[9]

	Baseline		Target	
	2015	2020	2023	2025
Impact indicators				
To reduce estimated TB incidence rate (per 100,000)	217 (112-355)	142 (76-255)	77 (49-185)	44 (36-158)
To reduce estimated TB prevalence rate (per 100,000)	320 (280-380)	170 (159-217)	90 (81-125)	65 (56-93)
To reduce estimated mortality due to TB (per 100,000)	32 (29-35)	15 (13-16)	6 (5-7)	3 (3-4)
To achieve zero catastrophic cost for affected families due to TB (%)	35	0	0	0
Outcome indicators				
Total TB patient notification	1.74 mil	3.6 mil	2.7 mil	2 mil
Total patient private providers notification	0.19 mil	2 mil	1.5 mil	1.2 mil
MDR/RR TB patients notified	28,096	92,000	69,000	55,000
Proportion of notified TB patients offered DST (%)	25	80	98	100
Proportion of notified patients initiated on treatment (%)	90	95	95	95
Treatment success rate among notified DSTB (%)	75	90	92	92
Treatment success rate among notified DRTB (%)	46	65	73	75
Proportion of identified targeted key affected population undergoing active case finding (%)	0	100	100	100
Proportion of notified TB patients receiving financial support through DBT (%)	0	80	90	90
Proportion of identified/eligible individuals for preventive therapy/ LTBI-initiated on treatment (%)	10	60	90	95

MDR: Multidrug-resistant, TB: Tuberculosis, RR: Rifampicin-resistant, DST: Drug susceptibility testing, DRTB: Drug-resistant TB, DSTB: Drug-susceptible TB, LTBI: Latent TB infection

Table 2: The “Detect – Treat – Prevent – Build” approach of National Strategic Plan 2017-2025^[9]

How do we do it?	
Detect	
Find all DSTB and DRTB cases with an emphasis on reaching TB patients seeking care from private providers and undiagnosed TB in high-risk populations	Scale-up free, high sensitivity diagnostic tests and algorithms Scale-up effective private provider engagement approaches Universal testing for drug-resistant TB Systematic screening of high-risk populations
Treat	
Initiate and sustain all patients on appropriate anti-TB treatment wherever they seek care with patient	Prevent the loss of TB cases in the cascade of care with support systems Free TB drugs for all TB cases Universal daily regimen for TB cases and rapid scale-up of short-course regimens for drug-resistant TB and DST guided
Friendly systems and social support	Treatment approaches Patient-friendly adherence monitoring and social support to sustain TB treatment Elimination of catastrophic costs by linkages of eligible TB patients with social welfare schemes including nutritional support
Prevent	
Prevent the emergence of TB in susceptible populations	Scale-up airborne infection control measures at health-care facilities Treatment for LTBI in contacts of bacteriologically-confirmed cases Address social determinants of TB through intersectoral approach
Build	
Build and strengthen enabling policies, empowered institutions, and human resources with enhanced capacities	Translate high-level political commitment to action through supportive policy and institutional structures: National TB elimination board with 4 divisions instead of the current administrative set up at the national level-TB Elimination efforts to be implemented in a “Mission mode” National TB policy and act Restructure RNTCP management structure and institutional arrangement: HR reforms to include unified state-level contractual supervisory cadre (merger of STS/STLS) and dedicated staff for TB surveillance network in the country Build supportive structures for surveillance, research and innovations, and a cafeteria approach of interventions based on local epidemiological situation Reforming STDCs and expanding the role of the Medical Colleges to include surveillance and as COEs Redefining the role of National institutes (NTI, NRTI, to encompass the burgeoning need for evidence to support policy advice Scale-up technical assistance at national and state levels Align and harmonize partners activities with program needs to prevent duplication

RNTCP: Revised National Tuberculosis Control Programme, STDC: State TB Training and Demonstration Centres, COE: Centers of excellence, NRTI: Nucleoside reverse transcriptase inhibitors, LTBI: Latent TB infection, TP: Tuberculosis, DST: Drug susceptibility testing, NTI: National Tuberculosis Institute, HR: Human Resources

international agencies, research institutions, private sector, and many others whose work is relevant to TB elimination in India. It provides goals and strategies for the country’s response to the disease during 2017–2025 and aims to direct the attention of all stakeholders on the most important interventions or activities that the RNTCP believes will bring about significant changes in the incidence, prevalence, and mortality of TB. These strategies and interventions are in addition to the processes and activities already ongoing in the country.^[5] As a strategic document, the subsequent operational plans will necessarily follow. The NSP will guide the development of the National Project Implementation Plan (PIP) and state PIPs, as well as district health action plans under the national health mission.^[6]

VISION, GOALS, AND TARGETS OF NATIONAL STRATEGIC PLAN

The NSP proposes bold strategies with commensurate resources to rapidly decline TB in the country by 2030 in line

with the global End TB targets and Sustainable Development Goal’s (SDG) to attain the vision of a TB-free India.

Vision

TB-Free India with zero deaths, disease, and poverty due to TB.

Goal

To achieve a rapid decline in the morbidity and mortality due to TB, while working toward elimination of TB in India by 2025.

Table 1 highlights the core impact, outcome indicators, and targets of the NSP that highlight the four thrust areas that include private sector engagement, plugging the leak from the TB-care cascade, active TB case finding among key populations (socially vulnerable and clinically high risk), and specific protection for prevention from development of active TB in high-risk groups.

Although India has managed to scale-up basic TB services in the public health system, treating more than 10 million TB patients under RNTCP, the rate of decline is too slow to meet

the 2030 SDG and 2035 End TB targets. Continuation of prior efforts has yielded inadequate declines and will not accelerate the progress toward ending TB. New, comprehensively-deployed interventions are required to hasten the rate of decline of incidence of TB many folds to more than 10%–15% annually.^[9]

The requirements for moving toward TB elimination have been integrated into the four strategic pillars of “Detect–Treat–Prevent–Build” (DTPB) [Table 2].

For achieving the goals of the NSP 2017–2025, the following critical components of the program will be addressed on priority.

1. MoHFW will evolve a scheme to address the patients seeking care in private sector. The scheme will have suitable incentives for the private doctors and patients to report TB cases coupled with another scheme to provide free of cost medicines to TB patients going to a private doctor/institute
2. A robust, modern management information system (MIS) system will be developed to monitor the newly diagnosed as well as existing cases of TB on delivery of the drug kit to the patient, compliance to treatment regimen, etc. The MIS system will have suitable linkages with the private pharmacy on sale of anti-TB drugs, thereby integrating those patients into the MIS
3. The availability of rapid molecular tests will be suitably augmented so that these diagnostic facilities are also made available for patients referred by any private doctor or institute
4. To improve the compliance of the TB patients to the treatment regimen, MoHFW will start customized SMS services to the individual patients on regular basis reminding them about the time to consume the drugs
5. The MoHFW will establish mechanisms for facilitating nutritional support to the TB patients, including financial support through DBT mode
6. The MoHFW will work on a scheme to provide suitable incentives to the states doing well in RNTCP. The incentives will also be linked with performance in “Swachh Bharat Mission”
7. TB Corpus Fund: To improve financial sustainability in the TB sector, the program will mobilize additional resources to accelerate TB control efforts, for which the “Bharat Kshay Niyantran Pratishthan” (India TB Control Foundation) is proposed. Activities such as nutrition support for TB patients, active case finding in prisons, slums, tribal area, sputum collection, and transport in difficult areas will be carried out.

To summarize, the ultimate impact of this NSP will be transformational improvements in the End TB efforts of India, thereby contributing to the health and well-being of its

population. The DTPB approach at the national program can achieve significant positive change and make a real difference in the lives of the many people it serves.

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